

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method of construction of a prothesis for patients of various weight categories, said method including the steps of:

(a) impregnating non-metallic fibres in a thermosetting resin whereby said impregnated fibres are arranged to form a sheet of said fibres;

(b) folding the sheet directly back on itself by bending adjoining parts of the sheet along adjacent fold lines, the fold lines arranged at an angle that is not perpendicular or parallel to the fibres, therebetween so that said fibres are arranged in an intersecting orientation to form a prepeg having a double layer of fibres in different planes with the fibres in each adjacent layer having a different angle of orientation to a longitudinal axis of the prepeg;

(c) cutting a plurality of pre-pregs from said sheet formed in step (b);

(d) forming layers of said pre-pregs obtained from step (c) so that said layers are arranged in stacked relationship in a mould cavity of a compression mould ~~whereby the mould cavity has a constant volume for each of the various weight categories;~~

(e) compression moulding at elevated temperature; and

(f) removing the prothesis from the compression mould.

2. (Original) A method as claimed in claim 1 wherein in step (a) use is made of a drum winding technique whereby said impregnated fibres are wound onto a drum so as to provide an intermediate composite sheet formed of the fibres supported on a sheet of release paper on the drum, whereby upon removal of the release paper, the sheet formed by step (a) is obtained by cutting the intermediate sheet as it is supported on the drum.

3. (Original) A method as claimed in claim 1 wherein use is made of a hot melt technique wherein after hot melt resin impregnation of the fibres they are laid onto a continuous sheet of release paper and subsequently stored as rolls.

4. (Original) A method as claimed in claim 1 wherein in step (d) layers of said pre-pregs having fibres arranged in an intersecting orientation are mixed with layers of pre-pregs which have all of their fibres arranged in a latitudinal and/or longitudinal orientation.

5. (Original) A method as claimed in claim 1 wherein in step (d) layers of said pre-pregs having fibres arranged in an intersecting orientation are alternated with layers of pre-pregs having all of their fibres arranged in a latitudinal and/or longitudinal direction.

6. (Original) A method as claimed in claim 1 wherein in step (d) there is a lay up sequence in the mould cavity wherein layers of pre-pregs having fibres arranged in an intersecting orientation are followed by layers of pre-pregs having their fibres arranged in a longitudinal and/or latitudinal orientation followed by layers of pre-pregs having their fibres arranged in an intersecting orientation.

7. (Original) A method as claimed in claim 1 wherein in step (d) successive layers are formed of pre-pregs having fibres arranged in an intersecting orientation which alternate with pre-pregs having fibres arranged in a longitudinal and/or latitudinal orientation.

8. (Original) A method as claimed in claim 1 wherein in step (c) the intermediate sheet is cut at a variety of different angles selected from the group consisting of 15°, 22.5°, 30°, 45°, and 60° so that the final sheet has sloping sides having an acute angle to vertical before folding of the final sheet upon itself to form said pre-peg.

9. (Original) A method as claimed in claim 8 wherein the angle is selected from 30° and 45°.

10. (Original) A method as claimed in claim 2 wherein the cutting of the intermediate sheet is carried out by provision of cutting lines or grooves which are formed in an outer surface of the drum at an angle selected from the group consisting of 15°, 22.5°, 30°, 45°, and 60° for pre-pegs of intersecting fibres.

11. (Currently Amended) A method as claimed in claim 4 wherein said pre-pegs having fibres arranged in a latitudinal and/or longitudinal orientation are formed from an intermediate sheet which ~~intermediate sheet~~ is cut at an angle of 0° for longitudinal fibres and 90° for latitudinal fibres having regard to a longitudinal axis of a drum supporting the intermediate sheet.

12. (Currently Amended) A method as claimed in claim 1 wherein step (d) is carried out in a mould cavity having the same dimensions ~~for different weights or regardless of the different weight categories of moulded product of the patients.~~

13. (Withdrawn) A prosthesis for patients of carious weight categories formed from composite materials having layers of non-metallic fibres impregnated with a thermosetting resin, characterized in the said prosthesis is formed at least partly from double layers of non continuous or cut fibres in different planes wherein the fibres area arranged in a an intersecting orientation wherein the fibres in each layer have an accurately predetermined different angle of orientation to a longitudinal axis of the prosthesis whereby said prosthesis has varying areas of fibre area weight along its lenght to provide said prosthesis with differential locations of stiffness and flexibility to enhance whereby thereof and said prostheses has the same dimensions or numbers of layers of fibres regardless of the weight category of the patient..

14. (Withdrawn) A prosthesis as claimed in claim 13 in the form of a pylon.

15. (Withdrawn) A prosthesis as claimed in claim 13 in the form of a J shaped pylon.

16. (Withdrawn) A prosthesis as claimed in claim 13 in the form of a sole plate.

17. (Withdrawn) A prosthesis as claimed in claim 13 in the form of a combination of a J shaped pylon attached to a sole plate so as to define a lower limb prosthetic device.

18. (Withdrawn) A prothesis as claimed in claim 13 wherein the pylon at least in outer extremities thereof is formed from a laminate of alternating layers of said intersecting fibres with layer(s) of said fibres arranged in longitudinal and latitudinal orientation.

19. (Withdrawn) A prothesis as claimed in claim 15 wherein the J shaped pylon has an upper shin mounting portion, a lower shin portion and an ankle zone.

20. (Withdrawn) A prothesis as claimed in claim 19 wherein the upper shin mounting portion has a substantially constant thickness and width.

21. (Withdrawn) A prothesis as claimed in claim 19 wherein the lower shin portion has a width that diverges outwardly as it approaches the ankle zone.

22. (Withdrawn) A prothesis as claimed in claim 19 wherein the ankle zone at or approaching a lower or free end thereof has a slight concave curvature.

23. (Withdrawn) A prothesis as claimed in claim 16 wherein the sole plate is of substantial width compared to an ankle zone of the J shaped pylon.

24. (Withdrawn) A prothesis as claimed in claim 16 wherein the sole plate has a heel portion and a toe portion.

25. (Withdrawn) A prothesis as claimed in claim 23 wherein the sole plate has a heel portion and a toe portion and the heel portion has a complementary or corresponding curvature to the ankle zone where they abut each other.

26. (Withdrawn) A prothesis as claimed in claim 13 which has substantially the same dimensions and shape regardless of weight.